

ribs, each terminating at a small circle at the apex, in the center of which the germ could be distinctly seen. The instinct of the butterfly in selecting the dwarf willows, which develop earliest, as a depository for its eggs in spring, while preferring the tree willows for the August brood is a matter of common experience. Last summer a large brood of the larvæ of this insect fed on the hop vines in the rear of my Brooklyn residence. A comparison of the number of eggs laid in the present instance with the ordinary number of larvæ generally constituting a brood after the second or third adult (50-100) may be used as an indication of the great percentage which never attain maturity. The stalk with its egg cluster were preserved in order to note further developments.

NEW NORTH AMERICAN TIPULIDÆ.

BY R. W. DOANE.

Dicranomyia ochracea, sp. nov. (Pl. VII, fig. 1.)

Ochraceous; front brownish; rostrum light yellow; palpi yellow, infuscated toward tip; antennæ light brown; joints of flagellum with a short sparse pubescence; verticels of moderate length; thorax pale ochraceous, dorsum with a broad brown stripe which is divided back of the suture; scutellum and metanotum with a brownish tinge; halteres pale; knobs brownish, abdomen brownish above, lighter underneath; forceps of male lighter brown; legs tawny, tarsi infuscated at tip; wings hyaline, stigma with a faint brownish tinge; tip of auxiliary vein opposite the origin of the præfurca; distance of the subcostal cross vein from the tip of the auxiliary vein about equal to the length of the præfurca; no marginal cross vein apparent; discal cell open, coalescing with the second posterior cell; veins brownish with a short pubescence in the apical portion of the wings. Length, male 4.5 mm.; wing 6 mm.

Habitat: Moscow Mountain, Idaho, one male. (Doane.) Type no. 103. Wash. Agric. Coll. & S. of S.

Dicranomyia cinerea, sp. nov. (Pl. VII, fig. 2.)

Cinereous; head cinereous; front with a rather broad brown longitudinal stripe; rostrum reddish brown; palpi brown; antennæ yellowish, somewhat infuscated; thorax cinereous, dorsum with three brown stripes, the median one divided by a narrow cinereous line; pleuræ with two distinct narrow brown lines, the space between the lines being almost white; metanotum slightly infuscated in the middle; halteres pale, knobs somewhat infuscated; abdomen brownish, lateral margins somewhat darker; ovipositor yellow; legs light tawny; tip of femora with a rather broad brown band; the base and tip of tibia likewise with a brown band which is some-

what darker than that of the femora; tarsi brownish almost blackish toward the tip; wings hyaline, stigma with a faint brownish tinge; tip of the auxiliary vein some distance before the origin of the præfurca, the distance being a little more than the length of the præfurca; distance of the subcostal vein from the tip of the auxiliary vein is greater than the length of the præfurca; no marginal cross vein perceptible; discal cell open, coalescing with the third posterior cell; first posterior cell distinctly narrowed at its outer end; veins brownish, those at the base of the submarginal, the first and the fourth posterior cells being much darker. Length, female 4.5 mm.; wing 5 mm.

Habitat: Pullman, Wash., one female. (Piper.) Type no. 104. Wash. Agric. Coll. & S. of S.

Dicranomyia citrina, sp. nov. (Pl. VII, fig. 3.)

Reddish yellow; head and antennæ somewhat lighter; antennæ infuscated toward tip; rostrum prolonged, two-thirds as long as head; thorax wholly reddish yellow; halteres pale, knob infuscated; legs light tawny yellow; tarsi slightly darker at tip; abdomen light tawny yellow; tip of ovipositor more reddish yellow; male genitalia large; wings hyaline, stigma pale; tip of auxiliary vein opposite the origin of the præfurca; subcostal cross vein only a short distance from the tip of the auxiliary vein; marginal cross vein at the tip of the first longitudinal vein; veins yellowish; discal cell closed. Length, female 7 mm.; wing 7 mm.

Habitat: Wawawai, Wash., one female. (Doane.) Type no. 105. Wash. Agric. Coll. & S. of S.

Resembles *D. pudica* O. S. but larger; wings broader, veins more yellowish and tip of auxiliary vein opposite instead of slightly anterior to the origin of the præfurca.

Dicranomyia helva, sp. nov. (Pl. VII, fig. 4.)

Yellow; head yellow; brownish above; rostrum yellow; antennæ brown; first segment of palpi yellow, others brown; thorax yellow with a brownish tinge, the single median brown stripe but faintly indicated back of the suture; pleuræ somewhat lighter yellow; halteres rather long, infuscated, lighter toward base; legs yellow, last segment of tarsi infuscated; abdomen brownish yellow; ovipositor lighter yellow; wings hyaline, stigma pale; tip of auxiliary vein opposite origin of præfurca; distance of the subcostal cross vein from the tip of the auxiliary vein equal to a little more than the length of the stigma; veins yellowish; discal cell closed. Length, female 6 mm.; wing 6.5 mm.

Habitat: Colorado, one female. (Morrison.) Type no. 106. Wash. Agric. Coll. & S. of S.

Dicranomyia isabellina, sp. nov. (Pl. VII, fig. 5.)

Ochraceous; head yellowish brown; rostrum yellowish; palpi and antennæ yellowish, the latter somewhat infuscated; thorax ochraceous; halteres pale, knob infuscated; abdomen brownish yellow, edge darker brown; ovipositor yellowish;

legs wholly tawny, with a very short dense black pubescence; wings hyaline, stigma with a very slight brownish tinge; the tip of the auxiliary vein anterior to the origin of the præfurca by about half the length of the stigma; the distance of the subcostal cross vein from the tip of the auxiliary vein about equal to the length of the præfurca; discal cell closed; veins brownish with a very short pubescence in the apical portion of the wings. Length, female 4 mm.; wings 5.5 mm.

Habitat: Pennsylvania, one female. (Dietz.) Type no. 107. Wash. Agric. Coll. & S. of S.

Dicranomyia brunnea, sp. nov. (Pl. VII, fig. 6.)

Brown; head grayish, brownish above; palpi and antennæ brown; dorsum of thorax reddish brown with a very narrow median lighter line; pleuræ with a grayish reflection; halteres pale, knob infuscated; legs tawny, tarsi and tips of femora and tibia darker; abdomen light brown, darker above; ovipositor reddish brown; wings with a slight brownish tinge; veins reddish brown; tip of the auxiliary vein very little beyond the origin of the præfurca; the distance of the subcostal cross vein from the tip of the auxiliary vein a little more than the length of the stigma; discal cell closed. Length, female 8 mm.; wing 8 mm.

Habitat: Nantucket, one female. (Scudder.) Type no. 108. Wash. Agric. Coll. & S. of S.

Dicranomyia gracilis, sp. nov. (Pl. VII, fig. 7.)

Pale yellow; head darker yellow, brownish above; palpi and antennæ brown; thorax pale yellow, the single median narrow stripe on the dorsum not extending back on the suture; halteres rather long, yellowish at base, infuscated toward tip, knob brownish; abdomen yellowish brown; legs tawny, tarsi slightly darker; wings hyaline, stigma pale; tip of the auxiliary vein opposite the origin of the præfurca; the subcostal cross vein some distance before the tip of the auxiliary vein; veins yellowish or brownish with a short pubescence in the apical portion of the wings; discal cell closed. Length, female 7 mm.; male 6 mm.; wing 7.5 mm.

Habitat: Moscow Mountain, Idaho, one male, one female. (Doane.) Type no. 109. Wash. Agric. Coll. & S. of S.

Dicranomyia moniliformis, sp. nov. (Pl. VII, fig. 8.)

Brown; head brown; rostrum yellowish; antennæ reddish brown, joints moniliform; palpi blackish, basal segment yellowish; thorax light brown, the single rather broad dorsal stripe almost obsolete; scutellum yellowish; metanotum dark brown; halteres pale, knobs yellowish; legs tawny, tarsi and the tips of femora and tibia darker; abdomen brownish yellow; wings with a brownish tinge; tip of the auxiliary vein a very short distance before the origin of the præfurca; subcostal cross vein near the tip of the auxiliary vein; veins brownish with a very short pubescence in the apical portion of the wings. Length, male 7 mm.; female 7.5 mm.; wings 8.5 mm.

Habitat: Colorado, one male. (Morrison.) Type. L. I., one female. Nantucket, one female. (Scudder.) Type no. 110. Wash. Agric. Coll. & S. of S.

Dicranomyia fulva, sp. nov. (Pl. VII, fig. 9.)

Yellowish; head grayish brown; rostrum grayish yellow; palpi black, yellowish at base; antennæ yellowish, infuscated dorsally and toward the tip; joints of flagellum moniliform; dorsum of thorax dark brown; pleuræ and metanotum reddish yellow, latter slightly infuscated; halteres pale; abdomen brownish; ovipositor light yellow; legs tawny, beset with a short dense black pubescence which makes them appear much darker; tarsi much darker; wings hyaline, stigma pale; tip of the auxiliary vein a very short distance beyond the origin of the præfurca; subcostal cross vein opposite the origin of the præfurca; the marginal cross vein at the tip of the first longitudinal vein; veins brownish; discal cell closed; posterior cross vein near the end of the discal cell. Length, male 7 mm.; female 9 mm.; wing 8.5 mm.

Habitat: Pullman, Wash., one male, six females. (Doane.)
Type no. 111. Wash. Agric. Coll. & S. of S.

Dicranomyia stigmata, sp. nov. (Pl. VII, fig. 10.)

Brown; head darker brown; palpi dark brown; rostrum and antennæ light brown; joints of flagellum moniliform; thorax brown; pleuræ and metanotum with a hoary reflection; halteres pale, knobs brownish; abdomen brownish above, lighter underneath; forceps of male lighter; legs tawny; tips of tarsi darker; wings hyaline, stigma brownish; tip of the auxiliary vein a short distance beyond the origin of the præfurca; subcostal cross vein nearly opposite the origin of the præfurca; distal cell closed; posterior cross vein before the inner end of the distal cell; veins brownish with a short pubescence in the apical portion of the wings. Length, male 6 mm.; wing 7.5 mm.

Habitat: Palo Alto, Cal., one male. (Doane.) Type no. 112.
Wash. Agric. Coll. & S. of S.

Dicranomyia infuscata, sp. nov. (Pl. VII, fig. 11.)

Brown; head darker; rostrum, palpi and antennæ dark brown; antennæ if bent back could reach a little beyond the base of the wing; thorax light brown; dorsum and a broad line on the pleura and the metanotum dark brown; halteres rather long, infuscated, yellowish at base, knobs brown; abdomen brownish above, lighter below; posterior margins of the segments darker; forceps of male very large, dark; legs brown; tips of femora and base of tibia whitish; wings hyaline, with a brownish tinge; stigma brown; tip of auxiliary vein a short distance beyond the origin of the præfurca; subcostal cross vein at the tip of the auxiliary vein; a very faint hardly perceptible brownish cloud along the cross veins; discal cell closed; veins brown, a very short pubescence in the apical portion of wings. Length, male 6 mm.; wing 5 mm.

Habitat: Collins, Ida., two males. (Piper.) Type no. 113.
Wash. Agric. Coll. & S. of S.

Dicranomyia duplicata, sp. nov. (Pl. VII, fig. 12.)

Brown; head darker; rostrum, palpi and antennæ brown, latter submoniliform; pedicels short and very slender; thorax grayish brown; stripes darker brown, indistinct; halteres pale, knobs slightly infuscated; legs tawny; tarsi, tips of femora and

tibia darker; abdomen brown; posterior margin of segments darker; wings grayish with brown spots and clouds; the four brown clouds along the anterior margin are the most conspicuous and are placed as follows: The first opposite the inner end of the basal cells; the second over the subcostal cross vein and opposite the tip of the anal vein which is also surrounded by a fainter brown cloud; the third over the tip of the auxiliary vein and the origin of the prefurca; the fourth over the marginal cross vein and the tip of the first vein; a brown cloud at the base of the submarginal cell and over all the cross veins; all the cells with small dots arranged in more or less irregular rows; tip of auxiliary vein a short distance beyond the origin of the prefurca; a second subcostal cross vein close to its tip; posterior cross vein just before the inner end of the discal cell which is closed. Length, female 7 mm.; wing 9 mm.

Habitat: Tokeland, Wash., one female. (Doane.) Type no. 114. Wash. Agric. Coll. & S. of S.

Geranomyia distincta, sp. nov. (Pl. VII, fig. 13.)

Yellow; head grayish above, proboscis yellowish, brownish toward base, about four times the length of the head; antennæ yellowish brown; thorax wholly reddish yellow; halteres pale; legs pale yellow; tarsi and tip of tibia darker; abdomen brown; forcep yellow; wings slightly tinged with yellow; stigma pale; tip of auxiliary vein opposite the middle of the prefurca; subcostal cross vein at the tip of the auxiliary vein; first longitudinal vein incurved toward the second; discal cell in the single specimen before me, open coalescing with the second posterior cell; veins yellowish. Length, male 6.5 mm.; wing 8 mm.

Habitat: New Bedford, Conn., one male. (Hough.) Type no. 115. Wash. Agric. Coll. & S. of S.

Trochobola elegans, sp. nov. (Pl. VII, fig. 14.)

Brownish yellow; head dark brown almost black; front and vertex silvery white; palpi dark brown; first two joints of antennæ dark brown, others much lighter brown; dorsum of thorax brownish yellow with three brown stripes, the lateral ones extending anteriorly over the prothorax, the median one sometimes divided back of the suture; pleura with a silvery reflection, with two brown stripes; metanotum brown; halteres dark brown; tips of knobs lighter brown, bases white; legs yellowish; femora with a brown band before the apex; abdomen yellowish with a brown band on the posterior margin of each segment; ovipositor short, reddish; wings with a whitish tinge, marked with many brown clouds and spots, those along margins being largest; the most important of these are as follows: one in the region of the humeral cross vein; one over the origin of the prefurca; one at the tip of the auxiliary vein; one just before and including the tip of the first vein; one at the tip of the second vein; and one in the margins of the fourth posterior, anal, axillary, and spurious cells; other smaller spots are scattered over the surface of the wing, the second basal cell containing more than any of the other cells; all the cross veins are broadly margined with brown and the tips of all the longitudinal veins are marked with larger or smaller spots. Length, male 9 mm.; female 10 mm.; wing 11 mm.

Habitat: Tokeland, Wash., one female (type). Collins, Ida., one male. (Doane.) Type no. 116. Wash. Agric. Coll. & S. of S.

Dicranoptycha borealis, sp. nov. (Pl. VII, fig. 15.)

Brownish yellow; head yellowish brown; palpi and the first two segments of antennæ brown, remaining segments of antennæ pale yellow, darker at the base; thorax yellow, dorsum with three rather broad brown stripes; pleura with a hoary reflection; metanotum with a brownish tinge; halteres pale yellow; lighter toward the base; legs yellow; femora with a brown ring at the tip and another a short distance before the tip; last segment of the tarsi brown; abdomen yellowish brown; wings rather broad with a yellowish or brownish tinge; small rather faint brownish spots at the origin of the præfurca, at the tip of the auxiliary vein, at the tip of the first longitudinal vein, and over all the cross veins; veins yellowish, those in the apical portion faintly margined with brown. Length, male 9 mm.; wing 11 mm.

Habitat: Unalaska, one male. (Kincaid.) Type no. 117. Wash. Agric. Coll. & S. of S.

Rhypholophus fusiformis, sp. nov. (Pl. VII, fig. 16.)

Light brown; head grayish brown; palpi brown; first two joints of antennæ yellowish, others light brown, fusiform, with a rather long fine dense whitish pubescence; thorax uniformly brown; halteres pale yellow, almost white; abdomen brown with a long rather dense golden yellow pubescence; wings rather broad with a brownish tinge, discal cell closed; sixth and seventh veins widely divergent toward the tip; a very faint brownish tinge in the region of the stigma; præfurca very long, arising at a sharp angle with the first vein some distance before the middle of the wing; posterior cross vein at the base of the discal cell; inner end of the discal cell very narrow; hairs on the wing rather short and sparse. Length, male 3.5 mm.; wing 5 mm.

Habitat: Collins, Ida., one male. (Piper.) Type no. 118. Wash. Agric. Coll. & S. of S.

Rhypholophus manicatus, sp. nov. (Pl. VII, fig. 17.)

Brown; head and its appendages brown; antennæ with rather long verticils, first two segments paler than the rest; thorax brown; pleura, and sometimes the metanotum, with a hoary reflection; halteres brown, whitish toward base; legs brown; femora somewhat lighter toward base; abdomen brown with a golden yellow pile; wings with a brownish tinge somewhat darker in the region of the stigma; discal cell open, coalescing with the third posterior cell; veins brown, sixth and seventh widely divergent toward the tip; præfurca arising before the middle of the wing; posterior cross vein at the base of the discal cell; hair on the wings rather long and dense. Length, male 4.5 mm.; female 4.5 mm.; wing 5 mm.

Habitat: Collins, Ida., three males, one female. (Piper.) Type no. 119. Wash. Agric. Coll. & S. of S.

Rhypholophus lanuginosus, sp. nov. (Pl. VII, fig. 18.)

Dark brown; head somewhat lighter brown; palpi brown; first two segments of the antennæ yellowish, others brown; in the male much elongated, fusiform, with a short whitish pubescence and distinct verticels; if bent back they would reach nearly to the base of the abdomen; the antennæ of the female are much shorter, hardly reaching the base of the wings; thorax wholly dark brown; halteres pale, slightly infuscated at tip; legs brown; coxæ and base of femora lighter; abdomen blackish, with a golden yellow pubescence; wings rather broad, with a brownish tinge; stigma brown; discal cell open; veins brown; seventh vein somewhat arcuated, so that the distal half of the anal cell is of almost the same width throughout; posterior cross vein at the base of the discal cell; pubescence on the wings rather long and dense. Length, male 6 mm.; female 8 mm.; wings 7.5 mm.

Habitat: Collins, Ida., seven males, one female. (Piper.) Type no. 120. Wash. Agric. Coll. & S. of S.

Rhypholophus fumatus, sp. nov. (Pl. VII, fig. 19.)

Brown; head and palpi darker brown; first two segments of antennæ yellowish, others brown, subcylindrical, comparatively short; thorax uniformly grayish brown, halteres light, knobs infuscated; legs yellowish; tarsi, and sometimes the tibia brownish; abdomen very dark brown with a short yellow pubescence; male genitalia lighter brown; wings with a brownish tinge; stigma dark brown; discal cell closed; veins brown, seventh arcuated in such a manner that the anal cell is broader in the middle than at the tip; posterior cross vein at the inner end of the discal cell. Length, male 5 mm.; wing 7 mm.

Habitat: Collins, Ida., three males. (Doane, Piper.) Type no. 121. Wash. Agric. Coll. & S. of S.

Erioptera comata, sp. nov. (Pl. VII, fig. 20.)

Brown; head brown, front grayish brown with a few short golden yellow hairs; rostrum and palpi dark brown almost black; antennæ brown, segments rather short, cylindrical; dorsum of thorax wholly brown; pleura with a faint silvery reflection; halteres pale; legs yellowish; the tarsi and the tips of the femora and tibia darker; abdomen brown with a sparse golden-yellow pubescence; male genitalia lighter; ovipositor ferruginous; wings hyaline; the brown pubescence along the veins giving them a brownish tinge; the præfurca ends in the first submarginal cell which is a little longer than the second; discal cell open; veins brownish, those at the base of the first submarginal and the discal cells as well as the posterior cross vein narrowly bordered with brown, thus making two small faint brown spots on the wings. Length, female 5 mm.; wing 6 mm.

Habitat: Pullman, Wash., two females (type). (Doane.) Seattle, Wash., one male. (Piper.) Type no. 122. Wash. Agric. Coll. & S. of S.

Chionea nivicola, sp. nov.

Reddish brown; head cinereous; eyes round, shining, black; rostrum nearly half as long as head; the four-jointed palpi somewhat reddish; antennæ a little longer

than the head, first three joints reddish brown, last five much lighter; first segment cylindrical, second segment cylindrical for the most part but the distal one-fourth much enlarged into a roundish knob; third about as long as the knob of the second, joining widely with the knob of the second but growing rapidly smaller distally; fourth equal in length to the third, fusiform; fifth a little longer than the fourth, cylindrical; sixth, seventh and eighth subequal with the fifth; all segments with a few rather long stiff hairs (the above description of the antennæ was drawn from a mounted specimen, examined with a simple lens it is almost impossible to determine the number of the segments); thorax brownish; halteres yellow, knob quite large, elongated; coxæ very large, same color as the thorax, excavated above toward the tip; femora reddish brown towards the base, darker toward the tip, long, appears flattened when seen from above but quite concave posteriorly; tibia reddish brown, somewhat flattened, only slightly concave posteriorly; tarsi darker; claws rather long, smooth; abdomen with six segments; pleura dirty brownish white, remainder reddish brown with a slightly darker median dorsal interrupted line; basal portion of ovipositor colored as the rest of the body, distal one-half reddish yellow, in some lights quite red, lower valves straight, sharp-pointed, upper valves slightly curved, longer, with more red; the upper and lower valves separated toward the base. Length, female 4 mm.

Habitat: Pullman, Wash., four females. (Doane.) Type no. 123. Wash. Agric. Coll. & S. of S.

Gonomyia virgata, sp. nov. (Pl. VII, fig. 21.)

Pale yellow; head yellow; palpi and antennæ brown, the latter when bent back would reach to the base of the wings; thorax pale yellow; dorsum almost completely covered by the broad brownish stripes; a brown stripe running from the collare to the base of the halteres and a narrow brown spot between the first and second pair of coxæ; metanotum brown; halteres pale, very slightly infuscated at the tip; legs tawny; tips of femora, tibia and tarsi somewhat darker; abdomen brown; ovipositor ferruginous; wings hyaline; stigma pale; tip of the auxiliary vein a short distance beyond the origin of the præfurca; subcostal cross vein close to its tip; no marginal cross vein; first submarginal cell a little more than half of the length of the second; inner end of the latter in one line with the first posterior and discal cells; four posterior cells; discal cell closed; posterior cross vein at its inner end; veins with a short pubescence in the apical portion of the wing. Length, male 5 mm., female 6 mm.; wing 6.5 mm.

Habitat: Tokeland, Wash., two males; four females. (Doane.) Type no. 146. Wash. Agric. Coll. & S. of S.

Cryptolabis bisinuatis, sp. nov. (Pl. VII, fig. 22.)

Brown; head darker brown; front rostrum and palpi blackish; antennæ brown, darker toward the tip; thorax wholly grayish brown; halteres pale; legs tawny; tarsi and the tips of the femora and the tibia darker brown; abdomen dark brown, very short; male genitalia paler; wings hyaline; veins brown; præfurca distinctly bisinuate; the very straight short sparse pubescence along the veins and in the cells

in the apical portions of the wings can hardly be detected with the simple lens. Length, male 3 mm.; wing 5 mm.

Habitat: Spokane, Wash., two males. (Doane.) Type no. 124. Wash. Agric. Coll. & S. of S.

***Limnophila flavapila*, sp. nov.** (Pl. VIII, fig. 1.)

Yellowish; head brown; front and occiput with a short golden-yellow pile; rostrum, palpi and basal segment of antennae darker brown, rest of antennae yellowish brown; thorax brownish yellow; pleura and metanotum with a silvery reflection; halteres yellowish, distal half of knob brown; legs yellow; tarsi and the tips of the femora and tibia brown; abdomen brownish yellow, ovipositor ferruginous; wings with a yellowish tinge; stigma brown; veins in the costal region yellowish, others brown, seventh somewhat bisinuate; the subcostal cross vein at the end of the auxiliary vein which apparently ends in the first longitudinal vein; marginal cross vein at the tip of the first longitudinal vein. Length, male 14 mm.; female 14 mm.; wing 13 mm.

Habitat: Pullman, Wash., one male; three females. (Doane.) Type no. 125. Wash. Agric. Coll. & S. of S.

***Limnophila nigrilinea*, sp. nov.** (Pl. VIII, fig. 2.)

Light yellow, with a continuous black band from the front of the head to the tip of the abdomen; head yellow, the black band partially interrupted in the middle; palpi brown; antennae light yellow; thorax pale yellow, the black band covering nearly all of the dorsum; legs tawny; femora, except the tip, more yellowish; abdomen yellowish below and on the sides, blackish above; wings hyaline with a very faint yellowish tinge along the anterior margin; a sparse short but distinct pubescence in all the cells in the apical portion of the wing; stigma pale; veins brown; tip of the auxiliary vein opposite the inner end of the second submarginal cell which is a little longer than the first posterior cell; marginal cross vein a short distance from the end of the first longitudinal vein and close to the inner end of the first submarginal cell; petiole of the latter longer than the posterior cross vein; four posterior cells; posterior cross vein before the middle of discal cell. Length, female 12 mm.; wing 14 mm.

Habitat: Olympia, Wash., one female. (Kincaid.) Type no. 126. Wash. Agric. Coll. & S. of S.

***Limnophila superlineata*, sp. nov.** (Pl. VIII, fig. 3.)

Brown; head grayish brown, vertex darker; palpi and first two segments of antennae rather dark brown; other segments of antennae lighter brown or yellowish; thorax gray; besides the usual three brown stripes, the median one of which is divided in front of the suture, there is on each side another narrow brown line; these run forward from the base of the wing and meet just above the collare; halteres light brown; knobs infuscated; legs yellowish brown; tips of the femora and the tibia darker; abdomen brown; ovipositor more reddish brown, rather long; wings with a grayish tinge, with brown spots or clouds in all the cells on all the cross veins and at

the tips of all the longitudinal veins; the largest of these are along the anterior margin, one covering the origin of the præfurca and others at the tips of the auxiliary and the first and second longitudinal veins; veins brownish; auxiliary vein ending far beyond the origin of the præfurca, subcostal cross vein a short distance from its tip; petiole of first submarginal cell about as long as the posterior cross vein; five posterior cells; the second basal cell with a supernumerary cross vein. Length, male 7 mm.; female 8 mm.; wing 8.5 mm.

Habitat: Wawawai, Wash., one male, three females. (Doane.)
Type no. 127. Wash. Agric. Coll. & S. of S.

***Limnophila lutea*, sp. nov.** (Pl. VIII, fig. 4.)

Yellow; head darker yellow, vertex brownish; palpi dark brown; antennæ brownish yellow; thorax wholly ochraceous; halteres light, knobs slightly infuscated; legs tawny; coxæ and basal half of femora yellowish; abdomen brownish yellow; wings with a faint yellowish tinge, immaculate; stigma pale; veins yellow; subcostal cross vein at the tip of the auxiliary vein, which is incurved toward the first vein and is opposite the inner end of the second submarginal cell; præfurca of moderate length about half as long as the first submarginal cell; marginal cross vein at tip of first longitudinal vein; petiole of first submarginal cell about equal in length with the posterior cross vein; inner end of the second submarginal, first posterior and discal cells nearly in one line; posterior cross vein at or near the middle of the discal cell; petiole of second posterior cell rather long but not quite as long as the cell itself. Length, male 7 mm.; wing 9.5 mm.

Habitat: Pa., six males. (Dietz.) Type no. 128. Wash. Agric. Coll. & S. of S.

***Limnophila badia*, sp. nov.** (Pl. VIII, fig. 5.)

Brown; head brownish gray; rostrum, palpi and antennæ brown; thorax brown; pleura hoary; halteres pale; legs tawny; femora lighter at base; abdomen brown, posterior margin of segments somewhat darker; wings with a very slight brownish tinge; stigma pale; veins brown with a short pubescence in the apical portion of the wing; tip of the auxiliary vein opposite the inner end of the second submarginal cell which is nearly in line with the inner end of the first posterior cell; marginal cross vein close to the tip of the first longitudinal vein; petiole of the first submarginal cell about as long as the posterior cross vein, the latter close to the middle of the discal cell; petiole of the second posterior cell short. Length, male 10 mm.; female 10 mm.; wing 10 mm.

Habitat: Olympia, Wash., three males, two females. (Kincaid.)
Type no. 129. Wash. Agric. Coll. & S. of S.

***Limnophila indistincta*, sp. nov.** (Pl. VIII, fig. 6.)

Brown; head darker brown; palpi dark brown; antennæ very light brown; dorsum of thorax yellowish brown; pleura darker brown; halteres pale, knobs slightly infuscated; legs very light brown; the tips of the femora and the tibia and the tarsi darker; abdomen brown; ovipositor ferruginous; wings hyaline; stigma brownish,

rather distinct; veins brownish with a short pubescence in the apical portion of the wings; subcostal cross vein at the tip of the auxiliary vein; the marginal cross vein a short distance before the tip of the first longitudinal vein (in the single specimen before me the marginal vein is very faint and can hardly be distinguished); petiole of the first submarginal cell short; the inner end of the second submarginal cell is in a line with the inner end of the first posterior cell; petiole of the second posterior cell but a little shorter than the cell itself. Length, female 7 mm.; wing 6.5 mm.

Habitat: Collins, Ida., one female. (Piper.) Type no. 130. Wash. Agric. Coll. & S. of S.

Phyllolabis obscuris, sp. nov. (Pl. VIII, fig. 7.)

Yellow; head yellow, brownish above; palpi and antennæ brown; the yellow on the dorsum of the thorax almost concealed by the three broad brown stripes, the lateral ones extending back of the suture; scutellum and metanotum brownish; pleura pale yellow; halteres pale, knobs brown; legs tawny; femora, tibia and the tarsi darker toward the tips; abdomen brown above, pale yellow below; ovipositor yellowish; wings long, narrow, hyaline; stigma pale brown; auxiliary vein ends nearly opposite the origin of the præfurca; subcostal cross vein near its tip; no marginal cross vein; first submarginal cell about half as long as second; inner ends of the second submarginal and first posterior cells in a line; four posterior cells; discal cell closed; posterior cross vein some distance before the middle of the discal cell. Length, female 5 mm.; wing 6.5 mm.

Habitat: Pullman, Wash., one female. (Doane.) Type no. 131. Wash. Agric. Coll. & S. of S.

Eriocera parva, sp. nov. (Pl. VIII, fig. 8.)

Black; head and palpi black; antennæ very dark brown; thorax black with a grayish bloom; dorsum with three indistinct stripes, the median one much the broadest; pleura and metanotum shiny black; halteres pale; legs very dark brown; abdomen shining black; forceps of male brownish; wings with a brownish tinge; stigma pale; veins brown; præfurca arising from the first longitudinal vein at a very obtuse angle; marginal cross vein before the inner end of the first submarginal cell; which is only about half as long as the second submarginal cell; discal cell more than twice as long as broad; four posterior cells; posterior cross vein near the inner end of the discal cell. Length, male 5 mm.; wing 7 mm.

Habitat: Stanford Univ., Cal., one male. Type no. 132. Wash. Agric. Coll. & S. of S.

Eriocera austera, sp. nov. (Pl. VIII, fig. 9.)

Very dark brown; head with a grayish bloom; rostrum and palpi black; antennæ very dark brown, first segment darker, third segment longest, equal in length to the fourth and fifth together; thorax with a grayish bloom; the three brown stripes on the dorsum are indistinct; metanotum shining black; halteres pale; legs dark brown; femora, tibia and tarsi darker towards tips; abdomen and forceps of male very dark brown; wings with a brownish or grayish tinge; all the cross veins, the

origin of the præfurca and the tips of nearly all the longitudinal veins with brown clouds; the posterior veins faintly bordered with brown; veins brown; origin of the præfurca with the stump of a vein; tip of the auxiliary vein nearly opposite the inner end of the second submarginal cell which is considerably longer than the first submarginal cell; marginal cross vein just a little beyond the base of the latter cell; four posterior cells; posterior cross vein near the inner end of the discal cell. Ten of the seventeen specimens that I have before me show these markings; five of the others have the discal cell open and the other two have the discal cell closed, but have a brown spot on the posterior side of the middle of the fourth longitudinal vein and another in the axillary cell. These were all collected on the same date. Length, male 7 mm.; wing 7 mm.

Habitat: Olympia, Wash., seventeen males. (Kincaid.) Type no. 133. Wash. Agric. Coll. & S. of S.

***Eriocera gibbosa*, sp. nov.** (Pl. VIII, fig. 10.)

Dark brown; head with a grayish bloom; frontal gibbosity large; rostrum yellowish; palpi black; antennæ black, first and second segments yellowish brown; thorax grayish brown with four indistinct brown stripes; halteres brown; legs yellowish brown; femora lighter toward the base; tarsi black; abdomen black or grayish brown; forceps of male of same color; ovipositor ferruginous; wings with a brownish tinge; stigma and veins darker brown; tip of the auxiliary vein opposite the inner end of the second submarginal cell which is much longer than the first submarginal cell; marginal cross veins at the inner end of the latter; four posterior cells; discal cell short; posterior cross vein near its inner end. Length, male 10 mm., female 12 mm.; wing 11 mm.

Habitat: Michigan, two males, one female. (Aldrich.) Type no. 134. Wash. Agric. Coll. & S. of S.

***Eriocera velveta*, sp. nov.** (Pl. VIII, fig. 11.)

Brown; head grayish brown; rostrum, palpi and antennæ brown, basal joint of latter lighter; thorax grayish brown; dorsum with six stripes, the lateral pair low down on the lateral margins; the pleura sometimes with brownish spots where the gray bloom has been rubbed off; halteres brown; legs brown; basal two thirds of femora reddish brown; abdomen and forceps of male velvety brown; ovipositor ferruginous; wings with a brownish tinge; stigma but a little darker; veins brown; the subcostal cross vein a short distance before the tip of the auxiliary vein; the tip of the latter nearly opposite the inner end of the first submarginal cell; the distance from the marginal cross vein to the inner end of the first submarginal cell about equal to the petiole of this cell; four posterior cells; posterior cross vein a little before the middle of the discal cell. Length, male 10 mm., female 13 mm.; wing 10 mm.

Habitat: Colorado, one male, one female. (Morrison.) Type no. 135. Wash. Agric. Coll. & S. of S.

A single specimen from Olympia, Wash., seems to belong to this species, but it is much larger, and darker in every respect and without any apparent stripes on the dorsum. It may be a distinct species.

Eriocera antennaria, sp. nov. (Pl. VIII, fig. 12.)

Brownish yellow; head reddish yellow; palpi rather short, brown; antennæ about once and a half the length of the body, first and second segments reddish yellow, other segments brown; the third if bent back would reach a little beyond the base of the wings; all the segments beyond the second with a fine short dense pubescence; those beyond the middle with a few scattered fine hairs which become more numerous toward the tip; thorax brownish yellow; dorsum with four obscure brown stripes; a narrow dark line from the collare to the base of the wing; halteres yellowish brown; legs yellowish; tarsi and tips of tibia and femora brown; abdomen and male forceps brownish yellow; wings with a very faint tinge which in some lights is yellowish, in others whitish; stigma pale; veins brown; tip of auxiliary vein opposite the inner end of the second submarginal cell; distance of the marginal cross vein from the inner end of the first submarginal cell a little less than the length of the petiole of this cell; four posterior cells; posterior cross vein before the middle of the discal cell; discal cell open in one specimen. Length, male 8 mm.; wing 10 mm.

Habitat: Columbus, Ohio, four males. (Hines.) Type no. 136. Wash. Agric. Coll. & S. of S.

Eriocera aurata, sp. nov. (Pl. VIII, fig. 13.)

Reddish yellow; head slightly darker; palpi rather long, broad, lighter toward the base; antennæ brownish yellow, same length in male and female, if bent back they would about reach the base of the wings; thorax reddish yellow, a faint brownish spot just before, and another just above the base of the wings; halteres reddish yellow, knobs brown; legs yellowish; tarsi and the tips of the tibia and the femora brown; abdomen and genitalia reddish yellow; wings with a deep yellowish tinge; stigma brown; tip of the auxiliary vein opposite the inner end of the first submarginal cell; the distance between the marginal cross vein and the inner end of the first submarginal cell is a little more than the length of the petiole of this cell; four posterior cells; posterior cross vein before the middle of the discal cell. Length, male 11 mm.; female 16 mm.; wing 12 mm.

Habitat: North Carolina, one male, one female. (Morrison.) Type no. 137. Wash. Agric. Coll. & S. of S.

Amalopis exoloma, sp. nov. (Pl. VIII, fig. 14.)

Brown; head, palpi and antennæ black; dorsum of thorax grayish brown; with three darker brown stripes, the median one divided; pleura and the metanotum gray; halteres light, knob infuscated; legs brownish, base of femora lighter; abdomen brown; forceps of male but little lighter; wings hyaline with two brown spots; the first is the smallest and is over the origin of the præfurca, the second covers that portion of the wing beyond the inner end of the first submarginal cell and in front of the second submarginal cell except for a small hyaline spot in the outer marginal cell; the subcostal cross vein, which is a considerable distance in front of the origin of the præfurca, is nearly bordered with brown; first submarginal cell longest; the small cross vein connecting the third and fourth longitudinal veins; five posterior cells, the second with rather a long petiole; veins brown. Length, male 9 mm.; wing 11 mm.

Habitat: Pullman, Wash., two males. (Doane.) Type no. 138.
Wash. Agric. Coll. & S. of S.

Amalopsis vitripennis, sp. nov. (Pl. VIII, fig. 15.)

Brown; head brown; rostrum and palpi darker; antennæ light brown, basal segments somewhat darker; thorax grayish brown with three brown stripes, the median one divided; halteres pale; legs brownish yellow; tarsi and tips of the tibia darker; abdomen brown; forceps of male also brown; ovipositor ferruginous; wings hyaline; veins and stigma brown; first submarginal cell much longer than the second; five posterior cells; discal cell closed; small cross vein nearly as long as the posterior cross vein, slightly arcuated. Length, male 8 mm.; female 9 mm.; wing 11 mm.

Habitat: Wawawai, Wash., one male, one female. (Type.) (Doane.) Olympia, Wash., two males, two females. (Kincaid.) Type no. 139. Wash. Agric. Coll. & S. of S.

Amalopsis disphana, sp. nov. (Pl. VIII, fig. 16.)

Brown; head brown; vertex, palpi and antennæ darker brown; thorax grayish brown, with three distinct broad brown stripes; halteres pale; knob infuscated; legs brown; base of femora lighter; abdomen dark grayish brown; male genitalia darker brown; ovipositor ferruginous; wings with a brownish tinge; veins and stigma brown; first submarginal cell but little longer than the second; anterior cross vein short, connecting the third and fourth longitudinal veins; five posterior cells; discal cells closed. Length, male 8 mm., female 9 mm.; wing 11 mm.

Habitat: Pullman, Wash., one female. (Type.) (Doane.) Olympia, Wash., four males, one female. Seattle, Wash., one male. (Kincaid.) Type no. 140. Wash. Agric. Coll. & S. of S.

Amalopsis ampla, sp. nov. (Pl. VIII, fig. 17.)

Ochraceous; head brown; rostrum and palpi darker brown; antennæ reddish brown; first segment more yellowish; thorax ochraceous, with three brownish stripes, the median one is very broad and distinct, usually divided; the lateral ones are less distinct, sometimes being indicated only on the back of the suture; halteres pale, knobs slightly infuscated; legs yellowish; the tarsi and the tips of the tibia and the femora brown; abdomen light brown, with a short golden yellow pubescence; posterior and lateral margin of each segment, and the forceps of the male yellow; the single female that I have before me has a much lighter, almost yellowish abdomen with a darker brown stripe along the middle; ovipositor ferruginous; wings, especially in the anterior portion, with a brownish tinge; veins brown with a short pubescence in the apical portion; prefurca with a stump of a vein at its origin; the first submarginal cell longer than the second; the second posterior cell petiolate; posterior cross vein near the base of the discal cell. Length, male 20 mm., female 24 mm.; wing 17 mm.

Habitat: Seattle, Wash., eight males, one female. (Piper.) Type no. 141. Wash. Agric. Coll. & S. of S.

Very like *A. calcar* but nearly twice the size and darker.

Amalopis constans, sp. nov. (Pl. VIII, fig. 18.)

Ochraceous; head darker; frontal gibbosity, rostrum and palpi brown; antennæ pale yellowish; dorsum of the thorax pale ochraceous with three broad darker stripes, the median one divided; all of the portion back of the suture, except the scutellum, brownish; pleura pale ochraceous; halteres yellowish; legs yellowish; tips of the femora, tibia and tarsi infuscated; abdomen brownish toward the tip; genitalia brown; wings, especially in the anterior portion, with a brownish tinge; the origin of the præfurca, all of the cross veins, the bases of the first and second submarginal and the posterior cells, and the tips of the auxiliary and the first longitudinal veins, clouded with brown; first submarginal cell shorter than the second; second posterior cell sessile; posterior cross vein near the inner end of the discal cell; veins brownish yellow. Length, male 18 mm.; female 20 mm.; wings 17 mm.

Habitat: Olympia, Wash. (Type.) Seattle. (Kincaid.) Tokeland, Wash., and South Bend, Wash. (Doane.) Type no. 142. Wash. Agric. Coll. & S. of S.

Dicranota argentea, sp. nov. (Pl. VIII, fig. 19.)

Brown; head grayish brown; vertex, front of gibbosity, palpi and antennæ darker brown; dorsum of thorax grayish brown with three dark brown stripes, the median one very broad; pleura and metanotum silvery gray; halteres pale, knob brown; legs dark brown; tarsi and tips of tibia and femora almost black; base of femora yellowish; abdomen grayish brown; ovipositor ferruginous; wings hyaline; stigma brown, filling the space between the two marginal cross veins; auxiliary vein ends in the costa in the stigma; first marginal cross vein close to the base of the first submarginal cell, second at the tip of the first vein; second submarginal cell but little longer than the first posterior cell; five posterior cells; discal cell open, coalescing with the third posterior cell. Length, female 9 mm.

Habitat: Seattle, Wash., one female. (Kincaid.) Type no. 143. Wash. Agric. Coll. & S. of S.

Polyangæus, gen. nov.

Two submarginal cells; five posterior cells; discal cell open, coalescing with third posterior cell; two marginal cross veins between the first and second veins; supernumerary cross veins in the first and second submarginal cells and in the second basal cell; subcostal veins some distance before the origin of the præfurca; præfurca short, strongly arcuated at the base; first submarginal cell shorter than the second; antennæ 13-jointed; if bent back they would not reach beyond the collare; front very broad posteriorly, rapidly narrowing anteriorly, without distinct gibbosity; eyes with a very short pubescence, contiguous below; rostrum and palpi short; tibia with short spurs at the tip.

Belongs to the group of *Amalopina* with 13-segmented antennæ and discal cell open. The description of this genus is based on a single specimen which may be further described as follows:

Polyangæus maculatus, sp. nov. (Pl. VII, fig. 20.)

Brown; head darker brown; palpi and basal segments of antennæ brown; other segments pale; thorax grayish brown; the dorsum almost covered by the three darker brown stripes; halteres and feet pale; tips of the femora, tibia and tarsi, and sometimes the base of the tibia also, brown, abdomen brown, lighter toward the base, wings hyaline; with brownish spots on the origin of the præfurca, at the base of the second submarginal and the first posterior cells, at the tip of the auxiliary vein and on nearly all the cross veins; stigma pale; auxiliary vein ends in the costa opposite the first marginal cross vein; petiole of first submarginal cell about the length of the posterior cross vein; inner end of the second submarginal cell but little before the inner end of the first posterior cell; the supernumerary cross veins in the submarginal cells seem to draw the veins which they connect toward each other; second posterior cell short; posterior cross vein before the inner end of the discal cell; seventh vein very slightly sinuate. Length, male 4 mm.; wing 5 mm.

Habitat: Seattle, Wash., one male (type). Olympia, one male. (Kincaid.) Type no. 144. Wash. Agric. Coll. & S. of S.

Cylindrotoma splendens, sp. nov. (Pl. VIII, fig. 21.)

Pale yellow and black; head very pale yellow almost whitish; occiput, front, rostrum and palpi brown; first and second segments of antennæ whitish, first with a brown ring, other segments brown, cylindrical, if bent back they would reach to about the middle of the first abdominal segment; thorax very pale yellow or whitish; dorsum with three opaque black stripes; the lateral ones merge anteriorly into broader brown stripes which curve in and meet the median stripe; collare with a black band; a large black spot on the pleura between the base of the wing and the anterior coxæ, another over the anterior coxæ, and another between the first and second pair of coxæ; a smaller one just in front of the base of the halteres, and a double on the posterior border of the metanotum; scutellum with a median brown stripe; halteres pale, slightly infuscated above and at the tips; legs brown, base of femora lighter; tarsi and tips of the tibia darker; abdomen black; male forceps large, brownish posteriorly; wings rather narrow, hyaline; stigma pale; veins brown; auxiliary vein ends abruptly just before the stigma; the small cross vein connecting the first longitudinal vein with the costa is very faint and situated a little beyond the middle of the stigma; submarginal cell either longer or shorter than the first posterior cell. (In two of my specimens it is longer in one wing and shorter in the other.) Thus the præfurca may either end in the submarginal cell or in the first posterior cell; five posterior cells, the second sessile; discal cell elongated, somewhat pointed anteriorly; posterior cross vein a little before the middle of the discal cell; fifth vein incurved at the tip. Length, male 9 mm.; wing 9 mm.

Habitat: Unalaska, three males. (Kincaid.) Type no. 145. Wash. Agric. Coll. & S. of S.

EXPLANATION OF PLATES.

Wings number 14 and 15 on plate VII are magnified about three and three-fourths times; all others five and one-fourth times. Numbers 6, 7, 20 and 21 on plate VIII are magnified about five and one-fourth times; all others three and three-fourths times. The drawings were made by Mrs. Nora Cooper Doane.

PLATE VII.

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| Fig. 1. <i>Dicranomyia ochracea</i> , sp. nov. | Fig. 12. <i>Dicranomyia duplicata</i> , sp. nov. |
| Fig. 2. <i>Dicranomyia cinerea</i> , sp. nov. | Fig. 13. <i>Geranomyia distincta</i> , sp. nov. |
| Fig. 3. <i>Dicranomyia citrina</i> , sp. nov. | Fig. 14. <i>Trochobola elegans</i> , sp. nov. |
| Fig. 4. <i>Dicranomyia helva</i> , sp. nov. | Fig. 15. <i>Dicranoptycha borealis</i> , sp. nov. |
| Fig. 5. <i>Dicranomyia isabellina</i> , sp. nov. | Fig. 16. <i>Rhypholophus fusiformis</i> , sp. nov. |
| Fig. 6. <i>Dicranomyia brunnea</i> , sp. nov. | Fig. 17. <i>Rhypholophus manicatus</i> , sp. nov. |
| Fig. 7. <i>Dicranomyia gracilis</i> , sp. nov. | Fig. 18. <i>Rhypholophus lauginosus</i> , sp. nov. |
| Fig. 8. <i>Dicranomyia moniliformis</i> , sp. nov. | Fig. 19. <i>Rhypholophus fumatus</i> , sp. nov. |
| Fig. 9. <i>Dicranomyia fulva</i> , sp. nov. | Fig. 20. <i>Erioptera comata</i> , sp. nov. |
| Fig. 10. <i>Dicranomyia stigmata</i> , sp. nov. | Fig. 21. <i>Gonomyia virgata</i> , sp. nov. |
| Fig. 11. <i>Dicranomyia infuscata</i> , sp. nov. | Fig. 22. <i>Cryptolabis bisinuatis</i> , sp. nov. |

PLATE VIII.

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| Fig. 1. <i>Limnophila flavapila</i> , sp. nov. | Fig. 12. <i>Eriocera antennaria</i> , sp. nov. |
| Fig. 2. <i>Limnophila nigriiinea</i> , sp. nov. | Fig. 13. <i>Eriocera aura a</i> , sp. nov. |
| Fig. 3. <i>Limnophila superlineata</i> , sp. nov. | Fig. 14. <i>Amalopsis evoloma</i> , sp. nov. |
| Fig. 4. <i>Limnophila lutea</i> , sp. nov. | Fig. 15. <i>Amalopsis vitripennis</i> , sp. nov. |
| Fig. 5. <i>Limnophila badia</i> , sp. nov. | Fig. 16. <i>Amalopsis diaphana</i> , sp. nov. |
| Fig. 6. <i>Limnophila indistincta</i> , sp. nov. | Fig. 17. <i>Amalopsis ampla</i> , sp. nov. |
| Fig. 7. <i>Phyllolabis obscuris</i> , sp. nov. | Fig. 18. <i>Amalopsis constans</i> , sp. nov. |
| Fig. 8. <i>Eriocera parva</i> , sp. nov. | Fig. 19. <i>Dicranota argentea</i> , sp. nov. |
| Fig. 9. <i>Eriocera austera</i> , sp. nov. | Fig. 20. <i>Polyangæus maculatus</i> , gen. nov. |
| Fig. 10. <i>Eriocera gibbosa</i> , sp. nov. | et sp. nov. |
| Fig. 11. <i>Eriocera velveta</i> , sp. nov. | Fig. 21. <i>Cylindrotoma splendens</i> , sp. nov. |

NOTE ON *Trypeta notata*.

On March 3d, of the present year, I collected a number of galls on *Bigelovia* (*Chrysothamnus*) *gravecolens* (sens. lat.) at Santa Fé, New Mexico. They were spherical, about 9 mm. diam., with a lateral pointed protuberance; surface rather thinly covered with appressed wool-like hairs. In due time I bred from these galls numbers of the flies, which I took for a new *Eurosta*; but Mr. Coquillett has kindly compared them with his *Trypeta notata*, JN. N. Y. ENT. SOC., Dec., 1899, p. 262, and finds them identical.

T. D. A. COCKERELL.